

IN THE CLAIMS

Please cancel claim 47 without prejudice or disclaimer.

Please amend claims 33, 38, 48, 99 and 100 as follows. For the Examiner's convenience, a clean copy of all pending claims 33-104 is being reproduced below, with the amended claims being so labeled, and a marked-up version of the amended claims being submitted in an Appendix attached at the end of this Amendment:

33. (Amended) An apparatus for determining characteristics of a running material web comprising:

at least one measuring device;

the at least one measuring device being movable and having at least two degrees of freedom of movement;

each of the at least two degrees of freedom of movement being at least one of a rotary movement and a linear movement;

the at least one measuring device being adapted to detect, at a plurality of measurement locations, data relating to at least one measured parameter; and

the at least one measuring device detecting data about at least one of the following measured parameters:

measured parameters which relate to a characteristic value of air in a region of the material web;

measured parameters which relate to the material web; and

other measured parameters,

wherein the at least one measuring device moves along the at least two degrees of freedom of movement during data detection.

34. The apparatus of claim 33, wherein the at least one measuring device is located in at least one of a machine for manufacturing the material web, a machine for refining the material web, a paper making machine, and a dryer section.

35. The apparatus of claim 33, wherein the measured parameters which relate to a characteristic value of air comprise at least one of air temperature, air moisture, air flow, air flow direction and air flow speed.

36. The apparatus of claim 33, wherein the measured parameters which relate to the material web comprise at least one of a thickness of the material web, a temperature of the material web, and a moisture content of the material web.

37. The apparatus of claim 33, wherein the other measured parameters comprise at least one of a temperature of dry air used to dry the material web, a dew point of dry air used to dry the material web, a temperature prevailing at or in a region of a surface of a dryer cylinder of a paper making machine, a permeability at a dryer sieve, a speed of air flow that is present at a surface of a dryer sieve, air humidity at an individual machine component, and air humidity at certain locations of the material web.

38. (Amended) The apparatus of claim 33, wherein the at least one measuring device moves while it measures without interruption from data detection.

39. The apparatus of claim 33, wherein the at least one measuring device is adapted to simultaneously carry out the at least two degrees of freedom of movement.

40. The apparatus of claim 33, wherein the at least one measuring device is adapted to carry out the at least two degrees of freedom of movement, one after the other timewise.

41. The apparatus of claim 33, wherein the at least one measuring device is movable in at least a first direction and in at least a second direction.

42. The apparatus of claim 41, wherein the second direction is perpendicular to the first direction.

43. The apparatus of claim 33, wherein the at least one measuring device is movable in at least a first direction, in at least a second direction, and in at least a third direction.

44. The apparatus of claim 43, wherein the second direction is perpendicular to the first direction and wherein the third direction is perpendicular to the second direction.

45. The apparatus of claim 33, wherein the at least one measuring device is movable, with respect to a running direction of the material web, at least one of parallel to the running direction and perpendicular to the running direction.

46. The apparatus of claim 33, wherein the at least one measuring device is movable, with respect to a running direction of the material web, at least one of along the running direction, transverse to the running direction, and vertically to the running direction.

48. (Amended) The apparatus of claim 33, wherein the at least two degrees of freedom of movement comprise at least two linear movements.

49. The apparatus of claim 48, wherein one of the at least two linear movements is perpendicular to another of the at least two linear movements.
50. The apparatus of claim 48, wherein the at least two linear movements comprises three linear movements.
51. The apparatus of claim 50, wherein one of the three linear movements is perpendicular to at least one of the other two of the three linear movements.
52. The apparatus of claim 33, wherein the at least one measuring device is rotatable about at least one axis.
53. The apparatus of claim 52, wherein the at least one axis comprises at least a first axis and at least a second axis.
54. The apparatus of claim 53, wherein the second axis is perpendicular to the first axis.
55. The apparatus of claim 52, wherein the at least one axis comprises a first axis, a

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second axis, and a third axis.

56. The apparatus of claim 55, wherein the second axis is perpendicular to the first axis.

57. The apparatus of claim 56, wherein the third axis is perpendicular to the second axis.

58. The apparatus of claim 33, wherein the at least one measuring device is adapted to be oriented in any desired manner in space by executing a plurality of rotary movements.

59. The apparatus of claim 58, wherein the plurality of rotary movements comprise at least two rotary movements.

60. The apparatus of claim 58, wherein one of the plurality of rotary movements has a first axis and another of the plurality of rotary movements has a second axis which is perpendicular to the first axis.

61. The apparatus of claim 58, wherein the at least two rotary movements comprise

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three rotary movements.

62. The apparatus of claim 61, wherein one of the three rotary movements has a first axis, another of the three rotary movements has a second axis, and still another of the three rotary movements has a third axis, with the second axis being perpendicular to the first axis.

63. The apparatus of claim 61, wherein one of the three rotary movements has a first axis, another of the three rotary movements has a second axis, and still another of the three rotary movements has a third axis, with the second axis being perpendicular to the first axis and with the third axis being perpendicular to the second axis.

64. The apparatus of claim 33, wherein the at least one measuring device is adapted to move along any desired presettable curve in space and is adapted to be oriented in any desired manner in space by executing a plurality of linear movements and rotary movements.

65. The apparatus of claim 64, wherein the plurality of linear movements and rotary movements occur simultaneously.

66. The apparatus of claim 64, wherein the plurality of linear movements and rotary

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movements occur one after another timewise.

67. The apparatus of claim 33, wherein at least one linear movement of the at least one measuring device is adapted to be changeable.

68. The apparatus of claim 33, wherein at least one rotational movement of the at least one measuring device is adapted to be changeable.

69. The apparatus of claim 33, wherein an orientation of the at least one measuring device is adapted to be changeable.

70. The apparatus of claim 33, further comprising one of a beam and a stationary frame, wherein the at least one measuring device is movable relative to the one of a beam and a stationary frame.

71. The apparatus of claim 33, wherein the at least one measuring device is one of connected to and movably attached to at least one of a frame, a beam, and a machine.

72. The apparatus of claim 33, wherein the at least one measuring device is movably

attached to a machine.

73. The apparatus of claim 33, wherein the apparatus comprises a mobile unit which can be used at different locations on a machine.

74. The apparatus of claim 33, wherin the at least one measuring device is movably connected to a joint.

75. The apparatus of claim 74, wherein the joint comprises at least one of a ball joint and a joint which enables a pivotal movement in at least one plane.

76. The apparatus of claim 33, wherein the at least one measuring device comprises at least one exchangeable measuring head.

77. The apparatus of claim 33, wherein the apparatus is adapted to utilize a plurality of different measuring devices.

78. The apparatus of claim 33, wherein the at least one measuring device is adapted to utilize a plurality of exchangeable measuring heads.

79. The apparatus of claim 33, wherein the at least one measuring device comprises a plurality of measuring devices.

80. The apparatus of claim 79, wherein the plurality of measuring devices comprises interchangeable measuring heads.

81. The apparatus of claim 79, wherein each of the plurality of measuring devices is adapted to measure a different parameter.

82. The apparatus of claim 33, further comprising at least one of a common operation unit and a control unit associated with the at least one measuring device.

83. The apparatus of claim 33, further comprising at least one of a drive unit, a supply unit, a data detection unit and an evaluation unit associated with the at least one measuring device.

84. The apparatus of claim 33, further comprising a frame, wherein the at least one measuring device is coupled to the frame.

85. The apparatus of claim 84, wherein the frame extends transverse to a running direction of the material web.

86. The apparatus of claim 85, wherein the frame is located beneath the material web.

87. The apparatus of claim 85, wherein the frame is located in a region of one of a dryer cylinder and a dryer roll.

88. The apparatus of claim 84, wherein the frame is located in a paper making machine, the frame being supported on both sides of the paper making machine.

89. The apparatus of claim 33, wherein the at least one measuring device is coupled to a beam.

90. The apparatus of claim 89, wherein the beam is one of vertically oriented and transversely oriented relative to a running direction of the material web.

91. The apparatus of claim 90, wherein the beam is located in a dryer section of a paper making machine.

92. The apparatus of claim 33, wherein the at least one measuring device is movably disposed in a cellar of a dryer section of a paper making machine.

93. The apparatus of claim 33, further comprising a protective device for protecting the at least one measuring device.

94. The apparatus of claim 93, wherein the protective device is adapted to protect against downwardly falling articles.

95. The apparatus of claim 93, wherein the protective device comprises at least one of a scraper and a sheet metal shield.

96. The apparatus of claim 33, further comprising at least one of an electrical, a pneumatic, and a hydraulic drive for moving the at least one measuring device.

97. The apparatus of claim 33, wherein the at least one measuring device is adapted to be manually movable.

98. The apparatus of claim 33, wherein the at least one measuring device is rotatable

about at least one axis and so as to be able to detect at least one measured parameter at a plurality of measurement locations.

99. (Amended) An apparatus for determining characteristics of a running material web in a paper making machine, the apparatus comprising:

at least one measuring device;

the at least one measuring device being movable and having at least two degrees of freedom of movement;

at least one of the at least two degrees of freedom of movement being a rotary movement;

at least another of the at least two degrees of freedom of movement being a linear movement;

the at least one measuring device being adapted to detect, at a plurality of measurement locations, data relating to at least one measured parameter; and

the at least one measuring device detecting data about at least one of a parameter relating to a characteristic value of air in a region of the material web and a parameter which relates to the material web,

wherein the at least one measuring device moves along the at least two degrees of freedom of movement during data detection.

100. (Amended) A method for determining characteristics of a running material web using an apparatus for determining characteristics of a running material web which includes at least one measuring device, the at least one measuring device being movable and having at least two degrees of freedom of movement, each of the at least two degrees of freedom of movement being at least one of a rotary movement and a linear movement, the method comprising:

moving the at least one measuring device along the at least two degrees of freedom of movement; and

during the moving, detecting data relating to at least one measured parameter, at a plurality of measurement locations and using the at least one measuring device,

wherein the at least one measuring device is adapted to detect data about at least one of the following measured parameters:

measured parameters which relate to a characteristic value of air in a region of the material web;

measured parameters which relate to the material web; and

other measured parameters.

101. The method of claim 100, wherein the at least one measuring device is located in at least one of a machine for manufacturing the material web, a machine for refining the

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material web, a paper making machine, and a dryer section.

102. The method of claim 100, wherein the measured parameters which relate to a characteristic value of air comprise at least one of air temperature, air moisture, air flow, air flow direction and air flow speed.

103. The method of claim 100, wherein the measured parameters which relate to the material web comprise at least one of a thickness of the material web, a temperature of the material web, and a moisture content of the material web.

104. The method of claim 100, wherein the other measured parameters comprise at least one of a temperature of dry air used to dry the material web, a dew point of dry air used to dry the material web, a temperature prevailing at or in a region of a surface of a dryer cylinder of a paper making machine, a permeability at a dryer sieve, a speed of air flow that is present at a surface of a dryer sieve, air humidity at an individual machine component, and air humidity at certain locations of the material web.